

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-46. (Canceled)

47. (New) A system for providing communications over an electric power system having a medium voltage power line, a plurality of customer power lines each extending to a customer residence, and a plurality of transformers coupling the medium voltage power line to the customer power lines, the system comprising:

a plurality of transformer bypass devices wherein each said transformer bypass device is communicatively coupled to the medium voltage power line and at least one customer power line to provide a data path bypassing one of said plurality of transformers; and

an aggregation device communicatively coupled to said plurality of transformer bypass devices via the medium voltage power line and forming a portion of a data path between the medium voltage power line and a point of presence.

48. (New) The system of claim 47, wherein said aggregation device comprises:

a first modem communicatively coupled to the medium voltage power line; and

a first coupling device forming at least part of a data path between said first modem and the medium voltage power line, and wherein said first coupling device is comprised of a magnetically permeable toroid.

49. (New) The system of claim 48, wherein said transformer bypass devices each comprise a second modem communicatively coupled to the medium voltage power line and a second coupling device forming at least part of a data path between said second modem and

the medium voltage power line, and wherein said second coupling device is comprised of a magnetically permeable toroid.

50. (New) The system of claim 47, wherein said aggregation device is in communication with the point of presence, at least in part, via an optical fiber.

51. (New) The system of claim 47, wherein said aggregation device is in communication with the point of presence, at least in part, via a wireless link.

52. (New) The system of claim 47, wherein each of said transformer bypass devices comprises:

a first modem communicatively coupled to the plurality of customer power lines; and

a second modem communicatively coupled to the medium voltage power line and said first modem.

53. (New) The system of claim 52, wherein each of said transformer bypass devices further comprises:

a first coupling device forming at least part of a data path between said second modem and the medium voltage power line, and wherein said first coupling device is comprised of a magnetically permeable toroid.

54. (New) The system of claim 53, wherein each of said transformer bypass devices further comprises a data router in communication with said first modem and said second modem.

55. (New) The system of claim 53, wherein said aggregation device comprises:
a third modem communicatively coupled to the medium voltage power line and in communication with said second modem; and

a second coupling device forming at least part of a data path between said third modem and the medium voltage power line, wherein said first coupling device is comprised of a second magnetically permeable toroid.

56. (New) The system of claim 55, wherein said second modem and said third modem communicate telephony data.

57. (New) The system of claim 55, wherein said second modem and said third modem communicate using Orthogonal Frequency Division Multiplexing.

58. (New) The system of claim 54, wherein said data router is configured to prioritize transmission of data received from the customer power lines.

59. (New) The system of claim 58, wherein said transformer bypass device communicates telephony data.

60. (New) The system of claim 52, wherein said first modem communicates using Orthogonal Frequency Division Multiplexing.

61. (New) The system of claim 54, wherein said transformer bypass device communicates Internet data.

62. (New) The system of claim 54, wherein said transformer bypass device communicates video data.

63. (New) A power line communication device providing a portion of a communication path between a medium voltage power line carrying a power signal and a plurality of communication devices, comprising:

a first modem communicatively coupled with the plurality of communication devices via the plurality of low voltage power lines;

a second modem in communication with said first modem and
communicatively coupled to the medium voltage power line; and

a coupling device forming at least part of a data path between said second
modem and the medium voltage power line wherein said coupling device is comprised of a
magnetically permeable core; and

a data router in communication with said first modem and said second modem,
wherein said data router is configured to prioritize data packets received from the plurality of
the communication devices for transmission on the medium voltage power line.

64. (New) The device of claim 63, further comprising a fiber optic isolation
device disposed between said second modem and the medium voltage power line.

65. (New) The device of claim 63, wherein said coupling device further comprises
a toroid and a winding.

66. (New) The device of claim 65, where in said toroid is comprised of a first
portion and a second portion in hinged relation to each other.

67. (New) The device of claim 66, where in said first portion and said second
portion are in hinged relation to each other.

68. (New) The device of claim 63, wherein said second modem uses Orthogonal
Frequency Division Multiplexing.

69. (New) The device of claim 66, wherein said first modem uses Orthogonal
Frequency Division Multiplexing.

70. (New) The device of claim 63, wherein said first modem is a wireless modem
for providing a communication link with the communication device that is at least a partially,
a wireless communication link.

71. (New) The device of claim 63, further comprising a power supply comprising a magnetically permeable core disposed in proximity to the medium voltage power line to induce power from the power signal carried by the medium voltage power line.

72. (New) The device of claim 70, where said power supply is configured to provide power to said second modem.

73. (New) The device of claim 63, wherein said first modem uses Orthogonal Frequency Division Multiplexing.

74. (New) A communication device for providing data communications through a medium voltage power line, comprising:

a communication interface providing at least part of a communication path with a point of presence;

a modem in communication with said communication interface and in communication with the medium voltage power line; and

a coupling device forming at least part of a data path between said modem and the medium voltage power line wherein said coupling device is comprised of a magnetically permeable toroid.

75. (New) The device of claim 74, wherein said communication interface is a fiber optic interface.

76. (New) The device of claim 74, wherein said communication interface is a wireless interface.

77. (New) The device of claim 74, wherein said modem uses Orthogonal Frequency Division Multiplexing.

78. (New) A communication device providing a data communication path between a medium voltage power line and user communication device, comprising:

- a first modem forming part of the data communication path;
- a second modem in communication with said first modem and forming part of the data communication path; and
- a coupling device forming at least part of the data communication path between said second modem and the medium voltage power line; and
- an isolation device forming part of the data communication path.

79. (New) The device of claim 78, wherein said coupling device is comprised of a magnetically permeable toroid.

80. (New) The device of claim 79, wherein said coupling device is further comprised of a winding in communication with said magnetically permeable toroid.

81. (New) The device of claim 80, where in said toroid is comprised of a first portion and a second portion.

82. (New) The device of claim 78, wherein said isolation device is light conducting communication medium.

83. (New) The device of claim 79, wherein said coupling device forms at least part of said isolation device.

84. (New) The device of claim 78, wherein said first modem is a wireless modem.

85. (New) The device of claim 81, where in said first portion and said second portion are in hinged relation to each other.